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T. A. EDISON

CABINET

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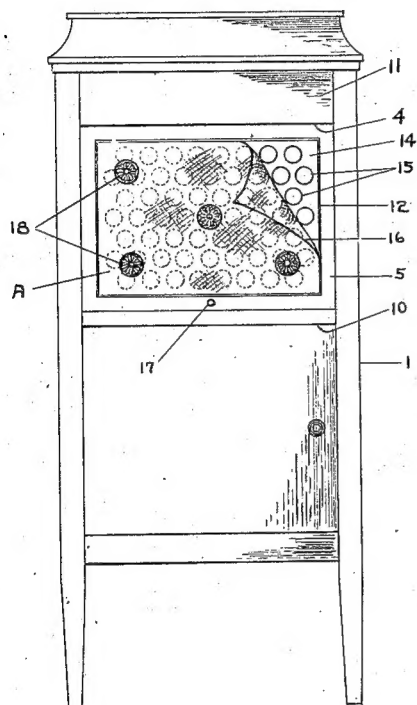


Fig. 1

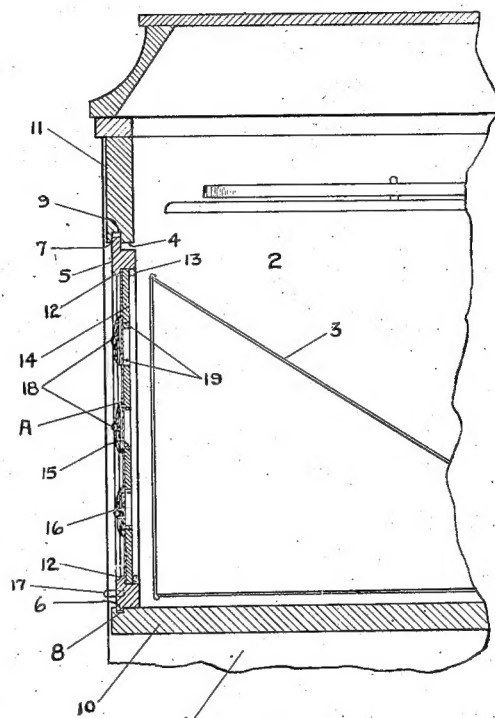


Fig. 2

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CABINET.

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My invention relates to cabinets, and while directed particularly to the enclosed horn type of phonograph cabinet in which a closure is provided for the exit opening of the horn or sound amplifying compartment, such opening usually being provided opposite the mouth of the phonograph horn or amplifier and in the front side wall of the cabinet, my invention is also applicable to other types of cabinets having sound amplifying or other similar compartments or chambers, such, for example as the cabinets of radio receiving sets of the type provided with an enclosed amplifier or loud speaker. In the case of many phonograph cabinets of the character referred to the closure for the exit opening of the horn or sound amplifying compartment consists of a grille or grating having applied to the inner side or back thereof a fine mesh screen, such as a screen formed of silk or other suitable fabric. Closures of this character are usually mounted so that they can be easily removed in order that ready access may be had to the horn or sound amplifying compartments.

Closures of the construction just described for phonograph cabinets and other similar cabinets, are open to certain objections, some of which will now be explained. The grilles of such closures are exposed to view and in order that they may present an artistic appearance are usually formed of wood and are of intricate and delicate design. Such a grille has to be very carefully cut and finished, rendering the same expensive to manufacture, and moreover is a dirt catcher and is difficult to clean and keep clean. In a closure of the type referred to some, at least, of the adjacent solid sections of the grille are spaced a considerable distance apart and accordingly the screen, usually formed of silk or other light fabric and usually secured to the inner face of the grille only at its edges, is quite likely to be torn, especially in removing the closure. I have also found that the use of a closure of this character results in an impairment of the acoustic qualities of the phonographic reproduction, due to the fact that the sound waves emanating from the amplifier of the phonograph first strike the screen, and cause the latter to vibrate against the grille.

The principal object of my invention is to provide a new form of closure for the exit

opening of the horn or sound amplifier compartment of a phonograph cabinet or the like, whereby the foregoing objections will be obviated and whereby certain other advantages, which will be hereinafter described, will be obtained.

Briefly described, my invention consists in providing a closure for the exit opening of a cabinet for a phonograph or the like, comprising a grille, preferably consisting of a wooden member of the proper size and shape having formed therein numerous and closely adjacent small openings, which need be of no particular shape or size, and a screen preferably formed of fine mesh material such as silk, applied to and covering the outer or front face of the grille.

For a clearer understanding of my invention, attention is directed to the drawing accompanying and forming a part of this specification, and in which:

Figure 1 is a view in front elevation of a phonograph cabinet provided with a closure for the exit opening of the horn compartment, in accordance with my invention, one corner portion of the screen of the closure being shown as turned down away from the grille; and

Figure 2 is an enlarged fragmental vertical sectional view, partly in elevation, of the cabinet shown in Fig. 1.

Referring to the drawing, reference character 1 designates a phonograph cabinet provided in the upper portion thereof with a sound chamber or compartment 2 for the usual horn or amplifier 3. The front wall of the cabinet is provided adjacent the mouth of the horn 3 with a sound exit opening 4, such opening as shown being rectangular in form. Reference character A represents a closure of my improved construction for the sound exit opening 4. The closure A comprises a rectangular frame 5, the lower bar or section of the frame being provided with a flange 6 and the upper bar or section with a flange 7. When the closure A is in position the flanges 6 and 7 are respectively engaged with grooves 8 and 9 formed in the partition 10, constituting the bottom of the chamber or compartment 2, and in the lower edge of the top front cross-piece 10 of the cabinet. The flange 6 is somewhat less in depth than the groove 8 and accordingly when the closure is in position as shown,

the lower section or bar of the frame 5 thereof will engage the upper side of the partition 10. The groove 9 is of such depth as to permit the closure A being removed from the cabinet by moving it upwardly from the position shown in Fig. 2, a distance sufficient to disengage the flange 6 from the groove 8 and then swinging the closure outwardly at the bottom and dropping it down to disengage the flange 7 from the groove 9. To replace the closure the flange 7 at the top thereof is engaged with the groove 9, the closure is then pushed upwardly and the bottom thereof moved inwardly to a position in which the flange 6 registers with the groove 8, whereupon the closure is dropped to the position shown in Fig. 2. To facilitate the application of the closure to the cabinet and the removal of the same therefrom, the lower bar or section of the frame 5 is provided with an outwardly projecting pin 17 designed to be grasped by the fingers.

The frame 5 is provided at the inner edges of the four sides thereof with an inwardly projecting flange 12, and secured within the frame 5 and firmly held against the flange 12, as by means of a suitable frame 13, is a grille or grating 14. This grille 14 is preferably formed of a single piece of suitable material, preferably wood, and is provided with openings 15 therethrough to permit the passage of sound waves from the chamber 2 to the outside of the cabinet. Applied to the outer or front face of the grille or grating 15 is a sound perforate screen 16. This screen is preferably formed of a close-mesh light fabric such as silk, is stretched tightly over the face of the grille 14 and is firmly secured at its edges, as by means of a suitable adhesive, to the grille. As the screen 16 hides the openings 15 in the grille, it is not necessary that the latter be made of artistic design or carefully cut and finished. Moreover, these openings may be made of any size, shape and number desired. I find it preferable to make the openings 15 circular and to provide the member 14 with a large number of such openings of small size and disposed closely adjacent each other. The solid sections between the openings 15 provide numerous points of support for the screen 16, and as the openings are of small size, there is little danger of the screen being torn when pressure is exerted upon the closure by the fingers or other objects. I have also found that with a large number of small openings 15 of the shape and disposition shown, there is but little effect produced upon the volume or quality of the sound reproduction because of the presence of the closure A. Moreover, I find that when a screen, such as screen 16, is applied to the outer face of the grille or grating instead of to the inner or rear face thereof, as is customary, the tendency of the screen to vibrate

against the grille by reason of the passage of the sound waves therethrough is reduced to a very marked degree.

A closure of the construction shown and described gives a pleasing appearance to the cabinet, as the only portions of the closure exposed to view are the face of the outer frame 5 thereof and the smooth and uninterrupted surface of the screen 16. In case it is desirable to enhance the design or appearance of the cabinet, one or more ornamental devices or members, such as the members 18, may be applied to the closure A outwardly of the screen 16. These members 18 are each provided with suitable fastening means such as pins 19 projecting rearwardly therefrom, which when the members are applied to the closure, are pushed or driven through the screen 16 into solid portions of the grille or grating 14. Any number of these ornamental devices or members 18 may be applied to the closure and as they are wholly separate and independent of each other, they may be arranged in any relative positions desired. Accordingly, a closure of my improved construction readily lends itself to a great variety of designs at little trouble and expense. It will be apparent that the ornamental devices 18 secured in position as described, also serve to more firmly hold the screen 16 against the grille or grating 14 and further reduce the tendency of the screen to vibrate under the action of the sound waves.

It will be understood that the embodiment of my invention specifically shown and described herein is subject to numerous changes and modifications without departure from the spirit of the invention or the scope of the appended claims.

Having now described my invention, what I claim as new and desire to protect by Letters Patent is as follows:

1. The combination of a cabinet having a sound chamber and a sound emitting device in said chamber, said chamber having a sound exit opening providing for the passage of sound emitted by said device from the chamber to the exterior of the cabinet, and a composite closure disposed in said opening comprising an inner rigid apertured member, a flexible fine mesh screen more remote from said device than said apertured member applied to the outer face of the latter and covering the openings therein, and a member disposed outwardly of the said screen and having fastening means extending therefrom through the screen securing such member to the apertured member, substantially as described.

2. The combination of a cabinet having a sound chamber and a sound emitting device in said chamber, said chamber having a sound exit opening providing for the passage of sound emitted by said device from

the chamber to the exterior of the cabinet, and a composite closure disposed in said opening comprising an inner rigid apertured member, a flexible fine mesh screen more remote from said device than said apertured member applied to the outer face of the latter and covering the openings therein, and a plurality of independent spaced members disposed outwardly of the screen, each of said members having fastening means extending therefrom through the screen securing such member to the apertured member, substantially as described.

This specification signed this 29th day of January, 1925.

THOS. A. EDISON.